Technology Serving the Future of America's Heritage

NCPTT Notes

U.S. Department of the Interior
National Park Service

A Publication of the National Center for Preservation Technology and Training | Issue 43 | www.ncptt.nps.gov

Cemetery Monument Conservation Training

Right: Instructors Irving Slavid and Karl Munson prepare to restore a fallen gravestone during NCPTT's Cemetery Monument Conservation Workshop in May. The restored monument can be seen on page 6

ALSO IN THIS ISSUE:

Monumental Resurrection

NCPTT Training Seminar and Workshop Meets Growing Demand for Information on Cemetery Monument Conservation

Recognizing a growing national demand for training on the conservation of cemetery monuments, the National Center for Preservation Technology and Training (NCPTT) recently organized a seminar and workshop on the conservation of gravestones and other monuments commonly found in cemeteries.

More than 60 participants from around the nation participated in the events held in Natchitoches, Louisiana, where NCPTT is headquartered. The participants represented a wide array of individuals involved in cemetery preservation, including cemetery association members, State Historic Preservation officers, national and state park employees, K-12 teachers who use cemeteries in their lessons, doctoral students conducting research in cemeteries, cemetery caretakers, monument builders, and family cemetery owners.

David Bushyhead, historic sites keeper with the Eastern Band of Cherokee Indians in North Carolina, attended both the seminar and workshop. As historic sites keeper, his duties are to locate, clear and maintain important sites, including gravesites.

"At this time, we have found all the past Cherokee chiefs gravesites and are now doing rock work around these sites along with headstones for the chiefs and their wives,"

continued on page 6

NCPTT Notes
Issue 43

NCPTT Executive Director
Kirk Cordell

Editor
Jeff Guin

NCPTT Notes is published by the National Park Service's National Center for Preservation Technology and Training.

The purpose of this publication is to convey NCPTT's Mission, which is to identify critical challenges to the preservation of our nation's cultural heritage and to seek solutions to these challenges through the innovative application of advances in science and technology.

The mail list for NCPTT Notes is subject to request under the Freedom of Information Act. Persons or organizations not wanting to have mail list information disclosed should unsubscribe.

Send comments to *NCPTT Notes* or submit articles or notices for consideration to ncptt@nps.gov

National Park Service
U.S. Department of the Interior

Inside NCPTT: Noteworthy Happenings at the Center

NCPTT Establishes Research Priorities

Recognizing emerging needs in the field of preservation technology, NCPTT recently established its research priorities for the next five years. These include:

1. Protect cultural resources against vandalism, looting and terrorism.

2. Conserve modern architectural materials.

3. Develop appropriate technologies to meet the particular needs of houses of worship and cemeteries.

4. Monitor and evaluate previously-applied preservation treatments.

5. Measure environmental impacts of pollution on cultural resources.

6. Document and preserve threatened cultural landscapes.

Many of these priorities are reflected in the articles featured in this issue of *NCPTT Notes*.

PTT Board Holds Spring Meeting

The PTT Board held its spring meeting in Atlanta on May 28. Board members discussed recent events at the Center, including the American Cemetery Seminar and Workshop and upcoming training for preservation engineers. The evening before the meeting, board members Robert Silman and Norman Weiss lectured on their work involving the preservation of Frank Lloyd Wright's "Fallingwater." The lecture was held at the Martin Luther King Jr. National Historical Site Visitor Center in Atlanta.

Interns Report on Research

Far from washing cars and making coffee, interns at NCPTT are making vital contributions to help the Center use technology to serve the future of America's heritage. On April 9, NCPTT interns Seth Fornea and Callie Reames presented the state of their work with the Center at Northwestern State University's Research Day.

Seth Fornea, a junior chemistry major at NSU, presented information on his research focused around new testing methodologies developed at the Center to study the effects of pollution on stone treated with protective substances.

Callie Reames, a senior journalism major at NSU (see profile under "New Faces" on page 10), spoke on her photodocumentation of the American Cemetery in Natchitoches.

NCPTT Personnel On the Road

NCPTT staff have covered the United States in the past few months, attending meetings and conferences about preservation to speak on the Center's research and programs. Recent speaking engagements included the following:

•**Kim Bowen**, Heritage Education —Louisiana assistant coordinator, spoke on heritage education at the Cultural Resources 2003/George Wright Society Meeting in San Diego.

•**Kirk Cordell**, NCPTT executive director, spoke at the Graduate Preservation Seminar at Louisiana State University on the work of NCPTT and its role in the national preservation program. Cordell also took part in the George Wright Society/NPS CR2003 Meeting in San Diego, introducing keynote speaker Alexander Stille and co-leading an affinity group session on preservation technology with Sharon Park.

•**ElizaBeth Bede Guin**, DuPont materials research fellow, recently delivered her presentation "Out of the Lab and into the Field" at the Restoration and Renovation conference in Baltimore, as well as her "Technology and Preservation" presentation at the Colorado Preservation, Inc., meeting in Denver. She also delivered the presentation "Air Pollution Effects on Cultural Resources" on behalf of Mary Striegel at the CR2003/George Wright Society Meeting in San Diego.

•**Andy Ferrell**, architectural and engineering research fellow, delivered the presentation "Preservation 101" at the Colorado Preservation, Inc. annual meeting in Denver.

•**Sheila Richmond**, heritage education program manager, spoke about NCPTT programs at the fifth annual Southeast Regional African American Preservation Alliance Conference in Tallahassee. In addition, Richmond spoke about heritage education at the International Conference of the Alliance of National Heritage Areas in Pittsburgh.

•**Mary Striegel**, Environmental and Materials Research program manager, spoke at the NPS Air Quality Summit in Colorado on the subject of Air Pollution and Cultural Resources. Striegel also spoke on the topic of cemetery preservation in hot and humid climates at APTI Toronto and at recent AIC Board meetings in her role as director of specialty groups.

Preserving Knowledge

Hopi Clans Seek to Pass Along Preservation Methods through NCPTT Training Grant

For centuries, architecture found in places like Hovenweep National Monument and Hopi villages has served as a vital part of the Hopi indian culture. Much of the historic architecture and ancient structures of the Hopi people are showing increasing signs of deterioration from weather and daily usage. As a result, ancestral sites of the Hopi people in units of the National Park Service and traditional architecture in the villages are deteriorating at a rate that exceeds the ability to maintain them.

In 2002, the National Center for Preservation Technology and Training awarded the Hopi Foundation a PTT Grant to fund a training program that leads to a professional career development path for preservation specialists. This training will help preserve the integrity, information and special meanings that these places hold for generations to come.

The training program includes a series of workshops and in-progress projects that are taking place over the course of 2003. Sponsored by the Hopi Foundation, Hopi Cultural Preservation Office, and the National Park Service, Southeast Utah Group, the workshops train Hopi youth in traditional architectural conservation. The goal of the workshops is to train Hopi young people in preservation philosophy, and stone masonry repair through hands-on experience.

"Hopi architecture is not isolated but part of a greater whole," states the architectural preservation technical guide *Kiiyamuy* that serves as part of the training curriculum. "It is no wonder that the term *pueblo* refers to our villages, the monuments of our ancestors, and our people. Such interconnectedness and interdependence define the physical, social and spiritual aspect of Hopi life."

Field work is being carried out at units in Hovenweep and several villages. Trainees will be instructed in masonry preservation techniques at Hovenweep by National Park Service professionals and in villages by the Hopi Cultural Preservation Office and Hopi Foundation professionals and craftsmen.

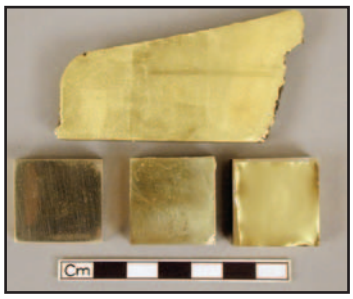
Through the NCPTT grant, the Hopi Foundation is initiating innovative approaches and projects to enhance and preserve traditional ways of life while at the same time meeting the challenges of a modern and highly technological era. The workshops address a diversified, systematic, multi-disciplinary approach to meet current and future preservation needs at Hovenweep National Monument and in Hopi villages. With each training session, trainees are developing the ability to understand and to work with the entire spectrum of the National Park Service site and preservation activities.

Barbara Poley, executive director of the Hopi Foundation, believes the training will be valuable in helping Hopi youth to discover and take part in their culture. "Through this National Center for Preservation Technology and Training grant, the Hopi Foundation and the Hopi Cultural Preservation Office has been able to train many of our youth in 2003," she said. "*Asquali* [Hopi female form of "thank you"] to NCPTT for its assistance in this effort."

Through an existing cooperative agreement, topics covered in the Hovenweep training include: non-destructive documentation including photography, mapping and map making; drawing scale elevations and cross sections; basic descriptive data-gathering processes to assess threats and evaluate architectural conditions; and preservation compliance and materials training.

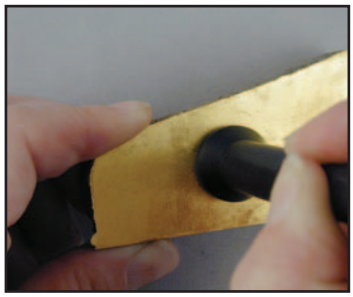
Above: A worker protects exterior stone walls (tu'kwa) of a Hopi building by applying a final plaster coat (palwitsöqa).

Top: Through a cooperative agreement with NPS, training in field work techniques is being done at Hovenweep National Monument.



Getting Under the Surface

NCPTT-Funded Research at Prominent Galleries Will Aid Conservation of Gilded Objects



Above: A probe is used to pulse electrical currents through a test object in order to measure the surface gilding.

Top: The reference samples are displayed: Leaf gilded at top (overlap of layers in middle); bottom left to right: electroless plated, mercury amalgam gilded, foil gilded.

Above Center: Blythe McCarthy, project leader, uses a probe to perform measurements on reference samples at the Freer Gallery.

A PTT Grant administered by the Center in 2001 continues to yield useful results in the study of gilded objects at the Smithsonian's Freer Gallery of Art in Washington D.C.

The study involves the use of "eddy currents"—essentially, pulsed currents of electricity emmited from a hand-held probe. The electrical current has been traditionally used on metal to detect flaws, corrosion and other anomalies, much like archeologists use ground penetrating radar to discover buried objects. In this study, however, the project team used eddy currents to measure the thickness of gilding on a museum piece.

According to Blythe McCarthy, project leader, the study evolved from the Gallery's hope to discover non-destructive testing methods for artifacts.

"Originally, we wanted to determine whether tin layers were present on the surface of bronze weapons in Freer's museum collection," McCarthy said. "When we identified eddy current techniques as a possibility, we decided to first apply it to the slightly simpler problem of gold on bronze."

As the method is perfected and adopted, it could replace the common invasive practice of removing cross-sectional samples for analysis.

The yearlong project involved setting up an eddy current test system, manufacturing reference test samples and then testing the samples. Using those results, the test methods were applied to actual museum objects.

Test measurements were able to discern differences between gilding layers of varying thickness, and also between gilding layers of varying composition. Measurements made on the Freer Gallery objects were consistent with reference sample results for mercury amalgam gilding.

McCarthy says the findings hold potential significance.

"We are excited by the results we have found so far and plan to continue research in several areas," she said. "Our initial work with pulsed eddy current techniques appeared promising and we will pursue this further."

The team also plans to further study the effects of differences in gilding composition and thickness on the eddy current measurements in order to better understand the effect of corrosion products on the measurements, expand the use of eddy currents to the study of other metals and to develop a more user-friendly system.

The eddy current project is one example of NCPTT's goal of emphasizing preservation technology research. According to McCarthy, the effort also made possible a wider cooperative effort.

"The support NCPTT provided was invaluable in enabling the collaboration between the Freer and Sackler Galleries and Johns Hopkins University," she said. "In addition, the purchase of materials for the standard samples, as well as specialized probes for the eddy current measurements would not have been possible without NCPTT funding."

While research continues on the use of eddy currents for the measurement of gilding layers, researchers involved with the project are optimistic that the methods they are studying will become a commonly-accepted weapon in the arsenal of non-invasive techniques available to conservators and scientists for studying art.

NCPTT Grant to Historic American Landscape Survey Fosters Historic Preservation Symposia

NCPTT's program goals to convene leading authorities and promote cultural stewardship through education are being accomplished through a PTT Grants project awarded to the American Society of Landscape Architects (ASLA), Historic Preservation Professional Interest Group.

The NCPTT grant allowed ASLA to sponsor symposia in New Orleans, Philadelphia, and San Francisco in 2002 to develop landscape documentation guidelines and standards. Each symposium engaged 25-30 experienced professionals from academia, private practice and the public sector, representing the fields of landscape architecture, history, ethnography, archeology, photography and associated disciplines.

Much of the discussion centered on the Historic American Landscapes Survey (HALS). Based on the Historic American Buildings Survey (HABS) and the Historic American Engineering Record (HAER), HALS is intended to document significant historic landscapes throughout the United States via narrative history, drawings and photographs.

Previous landscape documentation work by a variety of professionals and organizations was reviewed during the symposia, identifying similarities and differences between landscape documentation and the documentation of buildings, structures and engineering processes. The existing HABS/HAER documentation standards and guidelines were reviewed to determine what aspects of the existing framework are applicable to landscapes and what needs to be added (landscape dynamics such as seasonal color and vegetative growth over time, etc.).

Each symposium lasted between 2-3 days with lots of thought-provoking conversation. There was a public reception at each site to inform and educate the local preservation community about HALS and how they might participate in the HALS program development.

Throughout the meetings several documents were created. These included Project Selection Criteria and Draft Annotated Outlines for the Measured Drawing, Photography and Written History Guidelines. These drafts, along with other HALS information, can be found at the ASLA website: http://host.asla.org/groups/hppigroup/.

The American Society of Landscape Architects used an NCPTT grant to sponsor three symposia, including one in New Orleans (participants pictured). The symposia brought together preservation professionals to review existing landscape documentation and create new documents on topics such as Project Selection Criteria and Draft Annotated Outlines for the Measured Drawing.

As with the HABS/HAER teams of students in landscape architecture, architecture, planning, horticulture, and related disciplines, as well as interested professionals, will conduct fieldwork for HALS in short-term projects. Guided by HALS documentation professionals, the participants will record significant historic landscapes nationwide through measured and interpretive drawings, large-format photography, written narrative and other documentation techniques.

The results will not only document significant landscapes, but will instill a greater understanding of the relationship between land and history for the participants. Promoting this critical ethic among future stewards and design professionals mirrors what HABS/HAER has done over the past 50 years as it has educated hundreds of preservation professionals.

The location, duration, and complexity of HALS projects is being determined on the basis of historic significance, landscape type and potential partnership opportunities. HALS will work with the ASLA, state, local and national preservation organizations, academic institutions and other interested parties to develop projects and explore funding possibilities for both short and long-term documentation efforts.

HALS encourages partnerships with private, government and educational institutions to develop landscape documentation and encourage landscape preservation.

Above: A fallen grave marker is restored and wrapped in clear plastic to help the bonding epoxy set.

Top Photo: Fran Gale, technical director from PROSOCO, tells workshop participants about the variety of products available for cleaning cemetery monuments while her assistant, Courtney Williams, demonstrates the cleaning solutions on a grave marker in the American Cemetery.

Opposite Page: Professional stonemason Karl Munson helps Sheryl LaRouche, a doctoral student at the University of Maryland, as she applies a marble fill to help finish repairing the gravestone.

continued from front page

Bushyhead said. "With this workshop, I will be more efficient in the responsibility employed to me."

Several nationally-recognized experts worked together on the development and instruction for the seminar and workshop. The instructors included Norman Weiss, Irving Slavid, and Karl Munsen from Monument Conservation Collaborative of Colebrook, Connecticut; Fran Gale from PROSOCO of Lawrence, Kansas; Dennis Montagna from the National Park Service, Philadelphia, Pennsylvania; and Mary Striegel and ElizaBeth Bede Guin from NCPTT.

A Matter of Priorities

The seminar and workshop both stemmed from one of NCPTT's newly-established research priorities: meeting the preservation needs of houses of worship and cemeteries. Training was focused on monument conservation challenges common to the South. Based on demand, training events will be organized for other regions in the U.S.

The one-day seminar was held on May 13 at NCPTT and was attended by sixty-five participants from across the United States. The seminar provided a broad overview of issues facing those responsible for the conservation of cemetery monuments.

Dennis Montagna began the seminar with his presentation on various types of cemeteries and their value and importance as cultural landscapes. Norman Weiss followed with a presentation of the history of conservation in cemeteries and then a discussion of the range of monument materials often encountered.

Fran Gale extended the discussion of materials by speaking about the dominant deterioration mechanisms that occur with stone and masonry. Gale addressed the effects of environmental factors on cemetery monuments, including rain, pollution, groundwater, soluble salts, and biological growth.

Two sessions of the seminar were devoted to case studies. One session was entitled "Preservation Efforts Gone Bad" where inappropriate maintenance and conservation practices were illustrated and discussed. The second session hailed various success stories. Also covered in the seminar was the preparation and implementation of preservation master plans and the development and use of conditions surveys. These discussions were led by Irving Slavid, ElizaBeth Bede Guin, and Dennis Montagna.

Mary Striegel presented professional responsibilities within a preservation team and sources of information on cemetery preservation. The seminar also included two question-and-answer panel sessions in which the participants were encouraged to interact with both the instructors and fellow participants, share cemetery preservation experiences, and offer suggestions to increase knowledge about cemetery monument conservation.

continued on next page

American Cemetery: NCPTT Partners with Local Community as Part of Research Focus on Cemeteries

Though neglected for most of its 250 year history, the American Cemetery recently has become a hotbed of activity in the town of Natchitoches with historians and community volunteers wanting to preserve its historical integrity. The oldest documented grave is 1797 and many of the town's most prominent families are buried there along with veterans from all wars, including the Revolutionary War.

The National Park Service branches in the town are among those working to ensure restoration efforts are conducted with integrity. The Cane River National Heritage Area awarded a grant that will allow the cemetery's board to erect wrought iron fencing around the multi-block area and provide lighting. Those funds led to other work, such as that spearheaded by NCPTT, which undertook the project as part of its research emphasis to meet the preservation needs of cemeteries and houses of worhip. Under the direction of Dr. ElizaBeth Bede Guin, DuPont materials research fellow, the Center has undertaken a substantial joint effort with several individuals and organizations, including the American Cemetery Association, Cane River National Heritage Area and Northwestern State University.

Volunteers spent most of last summer documenting names found on markers and the graves' conditions. Many of the same volunteers have come on board for this summer as well. Results of their efforts are being cataloged into an electronic database which will be publicly accessible. This spring, NCPTT produced a comprehensive map of the cemetery identifying known gravemarkers. In addition, the public has helped by providing photographs and information on family grave plots.

Up Close and Personal

For participants interested in hands-on training in cemetery monument conservation, a two-day workshop followed on May 14-15 at the historic American Cemetery in Natchitoches. Thirty participants were selected for the workshop based on their applications. They hailed from eighteen states and the U.S. territory of Samoa and represented a wide range of cemetery preservation professions from local, city, state, tribal, and federal offices responsible for cemetery conservation to monument builders, cemetery associations, private industry, universities, and private cultural resource offices.

The workshop included hands-on condition assessment, safe handling procedures, and conservation treatments. The conservation treatments encompassed cleaning tests using water, hand-scrubbing with soft-bristle brushes, chemical methods, and low-pressure washing (less than 600 psi). Other hands-on treatments included the removal of failed repairs, resetting of a marker into its original base, adhesion of a marker with multiple breaks, the installation of fills, and curing/finishing techniques such as acid-washing fills.

Monumental Benefits

Two grave markers in the American Cemetery that had been broken in several pieces were reassembled and a new buried marker had been discovered by the end of the workshop. Also, stones were cleaned as part of the demonstrations.

Discussions during the workshop covered additional topics which included the use of other chemical treatments such as water-repellents, consolidants, and anti-graffiti coatings, the use of patching and grouting mixtures, the stabilization of foundations, the casting of new footings, and the resetting of markers.

NCPTT & American Cemetery
How it Happened

Spring 2001 American Cemetery Association applies to Cane River National Heritage Area Commission for funding to address security, restoration and site enhancement of the American Cemetery; grant awarded to install wrought iron fence, lighting, pathways and signage.

Fall 2001 American Cemetery Association undertakes a clean-up campaign of the cemetery.

The Cultural Resource Office at Northwestern State University (NSU CRO) produce a geophysical survey of rear of the cemetery to assess locations of unmarked burials; none present so this area was measured for the sale of new plots. Proceeds will be used to match federal funds from the Cane River National Heritage Area Commission.

American Cemetery Association commissions a landscape architecture plan.

Winter 2001 Topographic survey of cemetery completed.

Spring 2002 NCPTT begins written documentation of markers (inscription, type, etc.) and assessment of condition of the approximately 1,375 grave markers. This is the first step in developing a prioritized conservation plan for the markers in the cemetery.

Summer 2002 NCPTT and the NSU CRO create a map of the cemetery using laser transit mapping techniques.

NSU CRO conducts archeological investigation of the cemetery along perimeter in preparation for installation of fence.

City of Natchitoches horticulturalist undertakes landscaping clean-up and maintenance effort.

Fall 2002 NCPTT, the Cultural Resource Office, and the American Cemetery Association begin fragment cataloging and storage effort. Fence installation begins.

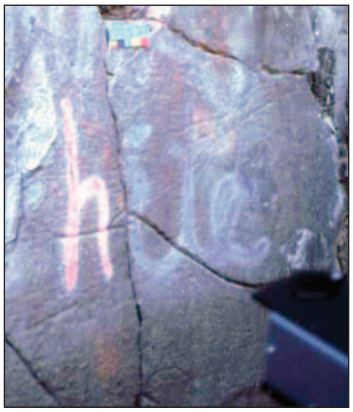
Winter 2002 NCPTT begins photo documenting each grave marker.

Spring 2003 NCPTT hosts a cemetery conservation course and workshop. The American Cemetery is the site of the field school for the workshop.

Summer 2003 NCPTT plans to develop prototypical conservation treatments for the grave markers.

Targeting Graffiti

Cooperative Agreement Leads to Field Tests on Lasers for the Removal of Grafitti at John Day Fossil Beds National Monument



Above Top: Picture Gorge, located at John Day Fossil Beds National Monument in Oregon, was vandalized with graffiti in 2002. A ghost image left by traditional chemical cleaning can clearly be seen.

Above: The "h" disappears after laser cleaning.

Above Right: J. Claire Dean of the Los Angeles County Museum of Art, sets up the laser before the test.

By Meg Abraham, J. Claire Dean and Jim Hammett, and Mark Gilberg

For several years NCPTT has sponsored research through a cooperative agreement with the Los Angeles County Museum of Art (LACMA) into the use of lasers as a tool for art conservation.

Among a number of directed projects, the conservation scientists at LACMA and NCPTT have been investigating the possibility of using lasers to remove graffiti from monuments and rock art sites. Protecting cultural resources against vandalism, looting and terrorism is among NCPTT's recently-established research priorities. Because of their great value to scientists and cultural importance to Native American communities, rock art sites provide a significant opportunity to conduct laser cleaning tests.

Staff at John Day Fossil Beds National Monument (JODA) in Oregon initiated tests by hosting a field trial of a portable laser system for cleaning graffiti off of local basalt. Though primarily established for its paleontological resources, the monument also includes numerous archeological sites—both along the John Day River and in its uplands.

U.S. 26, a major federal highway between the east and west sides of Oregon, runs right through the gorge. While the highway allows visitors a convenient opportunity for monument visitors to see pictographs, it also makes the pictographs vulnerable to vandals, as demonstrated in last year, when vandals spray-painted their names in the vicinity of one of the most accessible pictograph panels in the gorge.

Under the supervision of J. Claire Dean, an archaeological and ethnographic conservator specializing in rock art sites, the trial use of the laser is designed to both demonstrate the feasibility of transporting and running it at a remote site and to study the results of the use of the laser in removing graffiti. The test area was located within Picture Gorge and involved the graffiti from 2002. While the test was not performed directly on the vandalized rock art panel but on an area of graffiti adjacent, it is hoped that this test will allow the Park Service, and the conservators and paleontologists involved to assess the usefulness of the technique for those applications.

The use of traditional solvents and other conservation chemicals in the field—specifically in the context of rock art—presents a number of problems, ranging from safety and contamination issues to disturbance of traditional practices. by means of deposited organic remains, solvents also may make it impossible to carbon date the rock art, fossils and other geologically interesting features of the site. Lasers can be used to remove much of the graffiti without the application of solvents.

The potential use of laser technology addresses many of these issues as it involves the use of light to treat a surface – a clean alternative to the use of chemicals, and one that is more likely to be culturally appropriate and acceptable to Native American communities.

Although the laser unit and power generator used in the JODA field experimentation would be difficult to transport into truly remote locations, it would not be impossible.

Recently, the authors have had the opportunity to present the history of technology and demonstrate the laser to the cultural committee and elders of the Confederated Salish and Kootenai Tribes of the Flathead Reservation. As in the treatment at Fossil Monument, graffiti was removed from rock in areas which are similar to rock art sights but are not known to have any rock art present.

Laser holds great promise as an on-site treatment method for rock art conservation. The conservators, tribal members and park staff continue to monitor the test to determine how the long-term consequences of this treatment compare with those of traditional solvent applications.

Ensuring the Future of Our Past

As Program Expands throughout Louisiana, Education Professionals Gather in Baton Rouge for Recognition of 2003 Grant Award Winners

Education professionals throughout Louisiana gathered May 9 in Baton Rouge to recognize teachers making a difference in the lives of Louisiana's children.

Heritage Education—Louisiana, a program of NCPTT, presented its third annual mini grants awards for teachers with exceptional ideas for incorporating heritage education in their classrooms. The program was held in conjunction with National Preservation Week, May 5-11.

"Our partnerships with Louisiana's teachers have produced more than 100 innovative heritage education lessons in 38 parishes across the state," said Sheila Richmond, Heritage Education—Louisiana program manager. "The 2003 grants are among the most creative we've seen so far."

In addition to the 2003 awardees, teachers who have been awarded grants over the past two years were in attendence. To date, more than $50,000 has been awarded for innovative heritage education projects. The teachers had their projects on display during a reception following the event.

In full operation for only two years now, the program is making significant inroads into Louisiana's schools. Already, the program is in almost 60 percent of Louisiana parishes (the state's equivalent of a county) and states such as Maryland are adopting the program's model for their own initiatives.

Kathie Istre, a teacher in Lake Charles, used her 2002 grant to create an exhibit of Louisiana historical sites with photos taken by her students. The project taught students the basics of digital photography and helped them see their culture through a different lens as well.

"At the beginning of this project, I asked my students, 'Can you make a difference? I heard a unanimous 'no,'" Istre said. "The goal of this project was to bring awareness to the community and be a community contributor. Now they see that anyone, no matter the age can make a difference in the community."

Heritage Education—Louisiana was established by the National Park Service in 2000 to help children develop an appreciation and responsibility for the buildings and landscapes in their own hometowns. As a division of NCPTT, the program helps to achieve the Center's goal of promoting cultural stewardship through education. For a complete list of mini grant award winners, sample lesson plans and news about the program, visit the Heritage Education—Louisiana website: www.heritage-ed.com.

HERITAGE EDUCATION Louisiana

"The goal of this project was to bring awareness to the community and be a community contributor. Now [the students] see that anyone, no matter the age, can make a difference in their community."

Kathie Istre, teacher

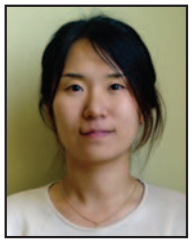
Above: Nancy Hawkins presents a "check" award to Teacher Kathie Istre for her project "Creating Heritage–One Community at a Time" during Heritage Education–Louisiana's mini grants awards ceremony May 9.

Top Left: Teachers display the fruits of their projects at a reception following the awards ceremony.

Interns Bring Diverse Experience to Summer 2003 Projects at NCPTT


Lydia Archeleta


Kara Dotter


Shine Park


Callie Reames


Nadina Reusmann


Kristin Sanders


Joan Walker

Each summer, interns come to NCPTT to learn about and participate in the Center's various research programs. This summer, seven students from widely diverse backgrounds are interning with NCPTT.

Lydia Archuleta is operating research equipment such as a laser profilometer this summer as part of her internship with the Environmental and Materials Research Program. Her work includes testing limestone samples to compare surfaces of the samples and grouping them based on the similarities of these surfaces.

Archuleta is a chemistry major at Northwestern State University of Louisiana. She recently performed research on the immobilization of cells on a glass slide in order to mathematically study their movement. The research will ultimately be used to find a cure for African Sleeping Sickness.

Kara R. Dotter joins the NCPTT staff this summer as the environmental and materials research graduate student intern. She will be performing laboratory tests aimed at discerning the effect of air pollution, particularly the effects of SO_2, on consolidated limestone and marble. Additional work will include refining and implementing a methodology for artificially aging treated stone samples, as well as assisting with the American Cemetery project.

Dotter has a B.S. in Geology and spent several years as a professional in the oil and gas industry. She is currently a graduate student at the University of Texas at Austin, studying for both a M.S. in Historic Preservation and a M.S. in Geology. After graduation, she will pursue a career in historic preservation as a stone conservationist, either in private practice or as university faculty.

Hyun Hee "Shine" Park comes to NCPTT as an exchange student in the National Park Service's Cultural Resources Diversity Internship Program. Park will be assisting the Heritage Education – Louisiana program in organizing summer teacher workshops. She is a senior at Old Dominion University in Norfolk, Virginia and is majoring in English.

As an exchange student, Park will complete a year at ODU and will then return to Yeungnam University in Korea. She plans to become involved in developing programs that incorporate education and historical resources.

Callie S. Reames, a senior journalism major at Northwestern State University, is working as a documentary photographer this summer for NCPTT's American Cemetery project. Reames' internship duties involve photographing grave markers in the cemetery using digital and black and white photo techniques, creating a digital and black and white archive, and assisting in grave marker preservation efforts.

Reames plans to graduate after spring 2004 with a degree in news-editorial journalism. Her future plans involve either continuing undergraduate work to pursue a degree in photography or applying to graduate school for journalism-related studies.

Nadina Reusmann is NCPTT's summer 2003 American Cemetery intern. She will be working with Dr. ElizaBeth Bede Guin in the initial phase of conservation of the monuments in the cemetery. Her tasks will include completing condition assessments initiated by former intern Jennifer Capetto last summer.

In addition, Reusmann will develop and implement a testing program to determine the most appropriate method for cleaning the monuments. She will also begin the development of prototypical conservation treatments specific to the needs of the American Cemetery and will help identify and stabilize all hazardous markers in the cemetery.

Reusmann is an architect from the University of Buenos Aires, Argentina, trained in architectural restoration with an emphasis in stone conservation. She is training as an objects conservator at the Fine Arts Museums of San Francisco.

She has been working as an assistant conservator at U. C. Berkeley, Department of Classics. Her work involves assisting with the restoration of a collection of ancient Greek plaster casts, including Parthenon friezes, donated to the University of California in the early twentieth century.

continued on next page

NCPTT Website Redesigned, Relaunched

Disseminating vital research in the field of preservation technology is a major function of NCPTT. One way this function is being fulfilled is the ongoing improvement of the Center's website: *www.ncptt.nps.gov*.

Rodney Harrison, web development specialist, recently redesigned the NCPTT website to reflect the Center's goal to serve as a Knowledge Center. The knowledge center concept ensures that the website will include research materials essential to preservation professionals.

Website components that have been updated and configured for ease of use include an on-line searchable database of PTT Grants and PTT Projects, an on-line bibliography from NCPTT's Materials Research Program and a searchable database of the Directory of Analytical and Materials Testing Services for Historic Preservation.

Each database can be queried by a simple keyword search. Users can also suggest additions to each database or notify NCPTT of changes to current listings by completing a form available at each query

screen. Also, new services, such as News, Advanced Search Functions, and Resources, can be accessed from the drop down menus on the website.

While the website's infrastructure is being revamped, staff at the Center are also working to maintain updated information on training and research projects. Additionally, the Heritage Education–Louisiana program is developing a portion of the site that will allow teachers and other interested parties to learn about current mini grants projects and view lesson plans by teachers affiliated with the program.

For more information about the Center's website, e-mail Rodney Harrison at rodney_harrison@nps.gov.

Kristin Pepperman Sanders is the Architecture and Engineering Research and Training intern at NCPTT this summer. She is working with Andy Ferrell on the Engineers and Historic Preservation Training Initiative, an effort to develop preservation training for engineers.

Sanders will aid in the development of content and resources for the architecture and engineering research and training component of NCPTT's website. She will be focusing on expanding the Engineers and Historic Preservation Training Initiative web pages. She will also begin researching sustainable preservation and creating a program to involve underrepresented groups in the preservation community.

Sanders graduated from Louisiana Tech University this spring with a bachelor's in history. As an undergraduate she was a NCPE intern with the National Register of Historic Places Writing Travel Itineraries. In the fall she will begin her Master's in historic preservation at the University of Georgia, where she hopes to also pursue a law degree.

Joan Walker is working as a materials research intern at NCPTT. She will be involved in continuing studies on the interactions between air pollution and stone surfaces with Dr. Mary Striegel.

In the materials research project, Walker will be assisting NCPTT staff with artificial weathering experiments and analysis measuring sulfur dioxide deposition on stone, as well as stone consolidant testing. Additionally, she will be working with other projects, such as the American Cemetery project, as needed. Walker is a senior at Washington University in St. Louis majoring in chemistry and art history. She has been involved in several education outreach programs related to science and art during her college career and in high school in Indiana.

Next Time in *Notes*

- **2003 grant awards reflect cutting-edge preservation technology research**
- **NCPTT and APT introduce training for preservation engineers**
- **CAMEO provides comprehensive one-stop shop for researchers**

Help Us Improve *NCPTT Notes*!

As an *NCPTT Notes* reader, your opinion is an important part of our efforts to make our publication one that is useful and enjoyable to read.

Please fax or return the enclosed business reply card to NCPTT:

NCPTT
645 College Ave.
Natchitoches LA
71457

Fax: 318-356-9119

Issue 43

National Park Service
U.S. Department of the Interior

National Center for Preservation Technology and Training
645 College Avenue
Natchitoches, Louisiana, 71457

Official Business
Penalty for Private Use, $300

First Class Mail
Postage and Fees
PAID
National Park Service
Permit No. G-83

EXPERIENCE YOUR AMERICA

United States Department of the Interior

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to tribes.

National Park Service

The National Park Service preserves unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education and inspiration of this and future generations. The Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.

NCPTT

NCPTT promotes the preservation of prehistoric and historic resources in the United States through applied research and professional training. NCPTT is located on the campus of Northwestern State University in Natchitoches, Louisiana.